

REMARKS/ARGUMENTS

Favorable action is requested.

In the replacement Specification herein presented, appropriate editorial changes have been made to sequence identification and Figures for consistency with the Nucleotide Sequence and Amino Acid Sequence Disclosures (37 CFR 1.821-1.825) submitted herewith as advised in the Office Actions of May 31, 2006 and August 15, 2006. No new matter has been introduced.

Per Examiner's Comment 4(e) to the Office Action of May 2, 2006, and per Applicant's May 5, 2006 telephone conference with Examiner Lucas, no restatement of the text of canceled Claims 1-111 will be further necessary. Any future amendment to the Claims may identify that this range of Claims as "Claims 1-111 (canceled)".

In the interest of clarity, we have re-typed the entire Specification to incorporate the subject matter added by the Amendments of October 1, 2003, February 13, 2006, April 3, 2006 and May 5, 2006. By this Amendment, we have added the first full paragraph on page 7. Otherwise, nothing is added except for sequence identifying information as set forth below. In the interest of clarity, however, we will now detail the genesis of everything added by Amendment to the October 1, 2003 filing.

The Substitute Specification beginning on page 3 herein is as originally filed on October 1, 2003, with the following revisions:

- a) The first paragraph (page 3 above) is amendatory of the first paragraph of the Preliminary Amendment, filed October 1, 2003, concurrently with the filing of the instant patent application.
- b) Page 7, first full paragraph, comes from page 3, first full paragraph of United States Patent Application Serial No. 573,643, filed August 27, 1990.
- c) Page 11, last paragraph to page 15, end of second full paragraph comes from page 4, line 2 to page 6, line 33 of United States Patent Application Serial No. 616,369, filed November 21, 1990.
- d) Page 17, third paragraph through to page 18 comes from page 6, line 23 through page 7, line 28, United States Patent Application Serial No. 573,643, filed August 27, 1990.
- e) Page 69, subheading I entitled "Diagnostic Systems and Methods" to page 113, end of the first full paragraph comes from page 37, line 15 to page 73, line 5 of the August 27, 1990 filing.
- f) Page 113, last two paragraphs beginning with "pGEX-2T-CAP-A" to page 115, end of last paragraph comes from page 62, line 9 to page 64, line 35 of the November 21, 1990 filing.

g) Page 116, top of the page through page 119 line 2, comes from the November 21, 1990 filing at page 74, line 16 to page 76, line 12.

h) Page 119, the first full paragraph comes from the November 21, 1990 filing, page 68, line 25 to page 69, line 3.

The file history of United States Patent Application Serial No. 573,643, filed August 27, 1990, is found in Mueth Declaration Exhibit 2. The file history of United States Patent Application Serial No. 616,369, filed November 21, 1990, is found in Mueth Declaration Exhibit 1.

These Sequence Identification Listings filed herewith have been revised in accordance with the formatting and other requirements of the Patent and Trademark Office now in effect, 37 CFR 1.821(c) and (e).

The origins of SEQ ID NOS: 1 to 29 are as set forth in the instant patent application as filed on October 1, 2003.

The origins of SEQ ID NOS: 30 to 76 are as follows:

<u>As presented in Substitute Specification filed herewith SEQ ID NO.</u>	<u>As presented in USPAS No. 573,643, filed August 27, 1990</u>	<u>As presented in USPAS No. 616,369, filed November 21, 1990</u>
30 and 73*	Figure 1	SEQ ID NO: 1
31 and 74*	Figure 2	SEQ ID NO: 2
32	p. 50, Table 1	pp. 48-49, SEQ ID NO: 15
33	p. 50, Table 1	Table 1, SEQ ID NO: 16
34	p. 50, Table 1	Table1, SEQ ID NO: 17
35	p. 50, Table 1	Table 1, SEQ ID NO: 18
36	p. 50, Table 1	Table 1, SEQ ID NO: 19
37	p. 50, Table 1	Table 1, SEQ ID NO: 20
38	p. 50, Table 1	Table 1, SEQ ID NO: 21
39	p. 50, Table 1	Table 1, SEQ ID NO: 22
40	p. 50, Table 1	Table 1, SEQ ID NO: 23
41	p. 58, line 30	p. 56, line 34, SEQ ID NO: 25
42	p. 58, line 32	p. 56, line 36, SEQ ID NO: 24
43	p. 59, line 4	p. 57, line 7, SEQ ID NO: 27
44	p. 59, line 6	p. 57, line 9, SEQ ID NO: 26
45	p. 60, line 1	p. 58, line 3, SEQ ID NO: 29
46	p. 60, line 3	p. 58, line 5, SEQ ID NO: 28
47	p. 60, line 10	p. 58, line 13, SEQ ID NO: 31
48	p. 60, line 12	p. 58, line 15, SEQ ID NO: 30
49	p. 61, line 9	p. 59, line 9, SEQ ID NO: 33
50	p. 61, line 11	p. 59, line 11, SEQ ID NO: 32
51	p. 61, line 18	p. 59, line 18, SEQ ID NO: 35

As presented in
Substitute
Specification
filed herewith
SEQ ID NO.

As presented in USPAS No.
573,643, filed August 27, 1990

As presented in USPAS
No. 616,369, filed
November 21, 1990

52	p. 61, line 20	p. 59, line 20, SEQ ID NO: 34
53	p. 62, line 14	p. 60, line 13, SEQ ID NO: 37
54	p. 62, line 16	p. 60, line 15, SEQ ID NO: 36
55	p. 62, line 19	p. 60, line 18, SEQ ID NO: 39
56	p. 62, line 21	p. 60, line 20, SEQ ID NO: 38
57	p. 62, line 27	p. 60, line 26, SEQ ID NO: 41
58	p. 62, line 29	p. 60, line 28, SEQ ID NO: 40
59	p. 63, line 35	p. 61, line 33, SEQ ID NO: 43
60	p. 64, line 2	p. 61, line 35, SEQ ID NO: 42
61	p. 64, line 8	p. 62, line 6, SEQ ID NO: 45
62	p. 64, line 10	p. 62, line 8, SEQ ID NO: 44
63	-----	p. 62, line 13, SEQ ID NO: 7
64	-----	p. 62, line 14, SEQ ID NO: 8
65 and 75*	-----	p. 62, line 28, SEQ ID NO: 3
66	-----	p. 63, line 1, SEQ ID NO: 9
67	-----	p. 63, line 2, SEQ ID NO: 10
68 and 76*	-----	p. 63, line 16, SEQ ID NO: 4
69	-----	p. 64, line 5, SEQ ID NO: 13
70	-----	p. 64, line 5, SEQ ID NO: 14
71 and 72*	-----	p. 64, line 34, SEQ ID NO: 6

*The above enumerated sequences, indicated by the asterisks, include both nucleotide (DNA) sequences and the encoded amino acid sequences. Pursuant to the Office Action of August 15, 2006, the amino acid sequences are now stated separately as follows:

Nucleotide SEQ ID NO.	Amino Acid SEQ ID NO.
30	73
31	74
65	75
68	76
71	72

No new matter is presented.

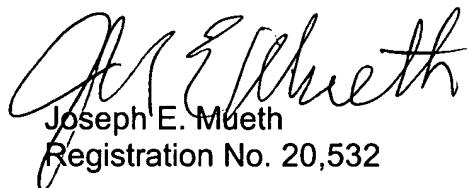
The sequence numbers referring to the Serial No. 616,369, filed November 21, 1990, include sequence numbers added by the Preliminary Amendment filed June 3, 1991 (Paper No. 6 in the file wrapper of Serial No. 616,369, part of File Wrapper United States Patent Application Serial No. 08/272,271, "Exhibit 1 to the Declaration of Joseph E. Mueth") to add such numbers.

The pending claims are numbers 112 to 123, inclusive.

An action on the merits is urgently requested.

Date: September 7, 2006

Respectfully submitted,



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